

# TB Times

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## CONGENITAL TUBERCULOSIS

The occurrence of direct transmission of tuberculosis from mother to child has been well established but is rare with less than 400 documented cases reported in the literature worldwide. By definition, congenital means infection acquired during intra-uterine life. There are two mechanisms of congenital transmission, each occurring in about 50% of the cases. One is by hematogenous spread through the umbilical vein and the other by aspiration or ingestion of infected amniotic fluid. Though the tubercle bacilli does not actually cross the placental barrier, it is believed that as the placenta ages, the barrier can erode allowing the tubercle to rupture into the fetal circulation thereby infecting the placenta or amniotic fluid.

Prior to the development of drug therapy, there was a 100% mortality rate for the newborn with congenital TB but even with effective treatment there is still an unacceptably high rate of 46%, mostly due to delays in diagnosis and treatment. Delays are often caused by the non-specific presenting symptoms in the newborn and the fact that the mother is frequently undiagnosed until the neonate becomes ill. Presenting symptoms include failure to thrive, jaundice, CNS abnormalities, hepatosplenomegaly, fever and respiratory distress (Hageman 1980).

*Cont'd on page 2*

## Case Reporting

As the year rapidly draws to a close, there are still many outstanding culture positive suspects that have not been confirmed as cases. As of November 24, 1998, 143 culture positive TB suspects were not confirmed. All cases need to be confirmed by Dec. 31, 1998 in order to be accurately included in the case count for 1998. TB Control urges everyone to submit and/or follow-up any outstanding paperwork. If you have any questions about reporting, call TB Control at 213-744-6160.

*Cont'd on Page 2*

## Conferences

TB Conferences on the first Friday of the month are held in the Andrew Norman Hall of Orthopaedic Hospital, located at Adams Blvd. & Flower Street. The Physician Case Presentations on the third Friday of the month are held at the TB Control Program Office, Room 506A. Participants must sign-in to receive applicable CME credit. Late arrivals of 15 minutes for a 1 hour program or 30 minutes for a 2 hour program will not receive CME credit.

January 1, 1999

9:00-10:15 a.m.

*"Cancelled"**Happy New Year!*

January 15, 1999

TB Case Presentations/Discussion

Hanh Q. Lê, M.D.

TB Control Program Office

February 5, 1999

Orthopaedic Hospital Conference cancelled today.

Everyone is urged to attend the

TB, HIV and Primary Care Conference

(see below)

February 19, 1999

TB Case Presentations/Discussion

Hanh Q. Lê, M.D.

TB Control Program Office

February 5 &amp; 6, 1999

*"TB, HIV and Primary Care"*

Hyatt Regency Hotel

Downtown Los Angeles, California

February 5th: County DHS Providers

February 6th: Community Based Providers

For more information call Mi Suk Yu-Harlan at 213-351-8196

### *Congenital Tuberculosis, cont'd*

Diagnostic criteria proposed by Cantwell include a proven tuberculous lesion and at least one of the following: 1) lesions in the first week of life 2) primary hepatic complex or caseating hepatic granulomas, 3) tuberculous infection of the placenta or maternal genital tract, and 4) exclusion of possible postnatal transmission by thorough contact investigation. Suggested testing for diagnosis includes gastric lavage for AFB culture, liver biopsy, bone marrow aspiration, lymph node biopsy, histological exam of the placenta, TB skin testing and fundoscopic exam. Suggested treatment is INH 10-15 mg/kg, RIF 10-20 mg/kg, PZA 15-30 mg/kg and SM 20-30 mg/kg or EMB 15 mg/kg. Streptomycin is preferred to EMB by many experts due to the risk of optic neuritis and the inability to monitor for this in infants. In conclusion, early diagnosis and treatment is imperative to the survival of the neonate born with congenital TB.

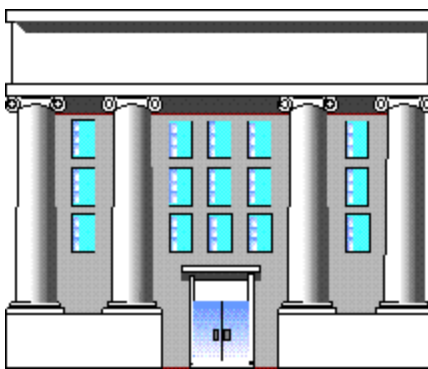
*Marilyn Beattie, R.N., is a Liaison Public Health Nurse at Olive View Medical Center. This was a synopsis of her presentation at Orthopaedic hospital on Nov 6, 1998.*

Hageman J, Schulman S, Schreiber M, et al. Congenital Tuberculosis: Critical Reappraisal of Clinical Findings and Diagnostic Procedures, *Pediatrics* 1980; 66:980-4.

Cantwell MF, Shehab Z, Costello A, et al. Brief Report: Congenital Tuberculosis, *NEJM* 1994 April 14, 330 (15): 1051-4.

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## *Satellite Clinic Relocates to Weingart Center*



On April 1st, the Central/Satellite TB Clinic relocated to the first floor of the Weingart Center, 515 E. 6th Street, Los Angeles. Dr. Magda Bartok, Central District Health Officer, says that the new center allows better

access to care for the district's high-risk TB patient population. In addition, the on-site x-ray capability allows for more efficient use of staff time and is more convenient for the patients.

The new facility is a "100% improvement" over the previous one, said Dr. Caridad Contreras, Central/Satellite Chest Clinician. The examination and waiting rooms are much nicer, and the rooms allow for improved privacy, so staff "can talk to the patients in confidence."

### *Satellite Clinic Relocates, cont'd*

Debbie Davenport, R.N., Nurse Manager, also sees the central location as a major benefit. The close proximity to the district's patient population makes visiting the clinic more convenient for patients and allows community workers to spend their time on important activities such as directly observed therapy, rather than on patient transportation.

Leo Perez, Senior Community Worker, believes that compliance has improved because of the new center's more central location. "Before, patients were not ready when we came to pick them up. Now they only have to walk one block," states Leo. The meal incentives are also more accessible since the Weingart Cafeteria is right around the corner.

Another plus is the on-site presence of the Weingart Clinic. "Because of the association with the ambulatory care clinic, patients can be seen for multiple problems at the same site," says Ms. Davenport.

The new location features a self-contained heating/cooling system, which allows for control of air exchange in the clinic area and provides a much safer atmosphere. Other improvements include a fully contained waiting area, a computerized registration area, which allows charts to be opened on-site; and increased security presence.

Dr. Bartok says that Central District staff and TB Control are planning an open house for early 1999, so interested parties will be able to see the new clinic facility for themselves. **TB Times** will provide more information on this event as it becomes available.

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## *F.Y.I.*

Congratulations to Mary Baca who has been promoted to the Office of AIDS Program and Policy. Mary has been a faithful and diligent employee for the TB Control Program for the past 8 years. We wish her the best of luck in branching out to new challenges. Wendi Drummond, Epidemiology Analyst, is also moving on to new endeavors. As a contributing editor of **TB Times**, she played an integral part in the development of the newsletter. She will be taking the experience gained in TB Control to broaden her knowledge base in public health by working in the Acute Communicable Disease Program.

TB Control staff would like to extend a warm welcome to some new employees to the Program. Nancy Montoya, R.N., A.P.S. comes from the Child & Adolescent Health Program and will be working in the Case Control Unit. Olivia Garcia, S.T.C., comes from the Laboratory Unit at High Desert and will be working with the liaison nurse at High Desert Hospital. Armando Garcia, S.T.C., comes from Pico Rivera Health Center and will be assisting the A.P.S. covering Pomona and Monrovia Health Centers. Anthony Lor, Student Professional Worker, is attending college at DeVry Institute of Technology and is assisting the Data Systems Unit in the installation of new computers for the Program and overall systems maintenance.



**Los Angeles County Department of Health Services  
Public Health Programs and Services  
Tuberculosis Control Program**

**1997 Fact Sheet**

**Epidemiology of Multidrug-Resistant Tuberculosis (MDR-TB)**

1. Multidrug-resistant tuberculosis (MDR-TB) is defined as *Mycobacterium tuberculosis* that is resistant to a minimum of both isoniazid (INH) and rifampin (RIF). Primary resistance is defined as drug resistance among persons with TB who had no previous treatment with anti-TB drugs. Secondary, or acquired drug resistance, results from failed treatment, most likely resulting from an irregular drug supply, poor compliance or an inappropriate regimen.
2. MDR-TB is perplexing and problematic because it is resistant to the two most effective first-line drugs (INH and RIF) available for the treatment of tuberculosis. Loss of these two drugs significantly lessens the chance for a cure. MDR-TB also presents many difficulties in the treatment and management of the patient due to the expense of treatment and the toxicity of many second-line drugs used to treat MDR-TB.
3. Drug resistance in patients with TB is a man-made problem which became evident sometime after the introduction of effective TB drugs. INH was introduced for the treatment of TB in the United States in 1952 and rifampin was introduced in the U.S. in 1971. However, the problem did not receive serious international attention until the early 1990s, following several outbreaks which occurred in hospitals, correctional facilities and other congregate living facilities. Many MDR-TB outbreaks involved HIV-infected persons.<sup>1</sup>
4. From 1994-1997, the World Health Organization (WHO) and the International Union Against Tuberculosis and Lung Disease conducted a global surveillance survey of drug resistance (primary and acquired). MDR-TB was found in all countries surveyed except for one (Kenya). For the 35 different countries surveyed, the overall prevalence of primary MDR-TB was 1.4% (range 0-14.4) but the prevalence of MDR-TB in persons with greater than 1 month of prior treatment was 13% (range 0-54.0). Overall prevalence was 2.2% (range 0-22.1).
5. Although the overall prevalence of MDR-TB is reportedly low, surveillance is limited in many countries by poor public health laboratory and reporting infrastructures. There is a high combined prevalence in some 'hot zone' countries which is cause for concern. Primary 'hot zones' include Baltic states such as Latvia (22.1%) and Estonia (11.7%), India (Delhi region) with 13.3%, and the Dominican Republic with 8.6%. The survey did not include some countries from which many of the MDR-TB patients in Los Angeles County originate such as the Philippines and China.
6. In 1991 and 1992, national drug resistance surveys were conducted for the first quarter. At that time, it was estimated that 3.5% of reported cases were multidrug-resistant and 61.4% of all MDR cases in the United States were from New York City. An analysis of data collected from 1993-96 for all culture-positive TB cases showed that MDR-TB prevalence decreased to 2.2%, with New York comprising 38% of the national MDR-TB cases.<sup>2</sup> High-risk groups included foreign-born persons, persons infected with HIV or persons who have had a prior episode of TB.
7. For a similar period from 1993-96, California had a prevalence of 1.5% of MDR-TB and Los Angeles County reported 36% of the MDR-TB cases. The most recent California data for 1996 indicate that the prevalence of MDR-TB (1.4%) has remained at a similar level with the proportion of MDR-TB in California reported by Los Angeles County decreasing to 24%.
8. The proportion of MDR-TB in Los Angeles County for all cases is currently less than 1%. For those cases with susceptibilities, 1.1% are MDR-TB. However, although MDR-TB prevalence is currently low, outbreaks of MDR-TB in New York City and other areas of the world in the late 1980s and early 1990s emphasize the importance of maintaining a good infrastructure for TB Control programs including improved surveillance infrastructure, laboratory services and better follow-up of cases.

<sup>1</sup> Pablos-Mendez A, Raviglione MC, Laszlo A, et al. Global Surveillance for Antituberculosis Drug Resistance, 1994-1997. The New England Journal of Medicine 1998; 338:1641-49.

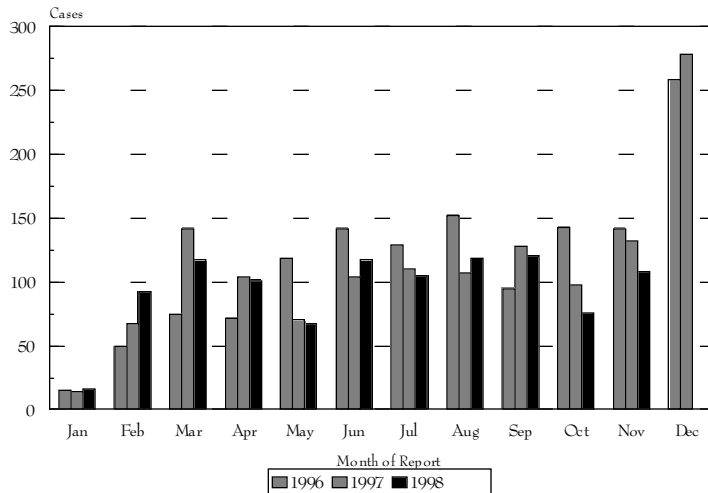
<sup>2</sup> Moore M, Onorato IM, McCray E, Castro KG. Trends in Drug-Resistant Tuberculosis in the United States, 1993-96. JAMA 1997; 278:833-37.

## Tuberculosis Cases by Health District Los Angeles County, November 1998 (Provisional Data)\*

Health District	November 1998	November 1997	Year to Date 1998	Year to Date 1997
Alhambra	7	6	77	67
Antelope Valley	2	1	17	16
Bellflower	3	7	32	43
Central	13	20	120	122
Compton	4	7	32	31
East Los Angeles	0	1	22	23
East Valley	2	5	51	42
El Monte	11	8	51	78
Foothill	0	2	19	17
Glendale	1	5	20	32
Harbor	1	2	10	14
Hollywood	12	9	102	96
Inglewood	9	3	55	45
Northeast	8	5	43	54
Pomona	5	3	53	39
San Antonio	5	8	41	48
San Fernando	1	3	21	17
South	4	6	37	36
Southeast	2	2	28	26
Southwest	6	8	53	56
Torrance	4	1	38	27
West	0	4	32	44
West Valley	6	13	59	67
Whittier	2	2	12	18
Unassigned	0	0	9	12
<b>TOTAL</b>	<b>108</b>	<b>131</b>	<b>1034</b>	<b>1070</b>

\*The overall yearly percent change from 1997 to 1998 is -3.4%.

# Los Angeles County Tuberculosis Control Tuberculosis Incidence By Month of Report, 1996-1998



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***TB Times*** is a monthly publication to provide information to those interested in TB surveillance and TB Control Program activities. Please forward your articles, comments, suggestions or address corrections to:

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## ***TB Times***

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## December Topics of Interest...

- ⇒ Congenital Tuberculosis
- ⇒ Year End Case Reporting
- ⇒ Satellite Clinic Relocation
- ⇒ Multi-Drug Resistant Fact Sheet